

# **Selected Acquisition Report (SAR)**

RCS: DD-A&T(Q&A)823-224



# B-2 Extremely High Frequency SATCOM and Computer Increment 1 (B-2 EHF Inc 1)

As of FY 2017 President's Budget

Defense Acquisition Management Information Retrieval (DAMIR)

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# **Common Acronyms and Abbreviations for MDAP Programs**

Acq O&M - Acquisition-Related Operations and Maintenance

**ACAT - Acquisition Category** 

ADM - Acquisition Decision Memorandum

APB - Acquisition Program Baseline

APPN - Appropriation

APUC - Average Procurement Unit Cost

\$B - Billions of Dollars

BA - Budget Authority/Budget Activity

Blk - Block

BY - Base Year

CAPE - Cost Assessment and Program Evaluation

CARD - Cost Analysis Requirements Description

CDD - Capability Development Document

CLIN - Contract Line Item Number

**CPD - Capability Production Document** 

CY - Calendar Year

DAB - Defense Acquisition Board

DAE - Defense Acquisition Executive

DAMIR - Defense Acquisition Management Information Retrieval

DoD - Department of Defense

**DSN - Defense Switched Network** 

EMD - Engineering and Manufacturing Development

EVM - Earned Value Management

FOC - Full Operational Capability

FMS - Foreign Military Sales

FRP - Full Rate Production

FY - Fiscal Year

FYDP - Future Years Defense Program

ICE - Independent Cost Estimate

IOC - Initial Operational Capability

Inc - Increment

JROC - Joint Requirements Oversight Council

\$K - Thousands of Dollars

**KPP - Key Performance Parameter** 

LRIP - Low Rate Initial Production

\$M - Millions of Dollars

MDA - Milestone Decision Authority

MDAP - Major Defense Acquisition Program

MILCON - Military Construction

N/A - Not Applicable

O&M - Operations and Maintenance

**ORD - Operational Requirements Document** 

OSD - Office of the Secretary of Defense

O&S - Operating and Support

PAUC - Program Acquisition Unit Cost

PB - President's Budget

PE - Program Element

PEO - Program Executive Officer

PM - Program Manager

POE - Program Office Estimate

RDT&E - Research, Development, Test, and Evaluation

SAR - Selected Acquisition Report

SCP - Service Cost Position

TBD - To Be Determined

TY - Then Year

UCR - Unit Cost Reporting

U.S. - United States

USD(AT&L) - Under Secretary of Defense (Acquisition, Technology and Logistics)

# **Program Information**

### **Program Name**

B-2 Extremely High Frequency SATCOM and Computer Increment 1 (B-2 EHF Inc 1)

#### **DoD Component**

Air Force

# **Responsible Office**

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Phone:

DSN Phone:
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Date Assigned: May 6, 2013

937-713-6450

937-656-7207

716-6450

986-7207

robert.strasser@us.af.mil

### References

### **SAR Baseline (Production Estimate)**

Air Force Acquisition Executive (AFAE) Approved Acquisition Program Baseline (APB) dated September 20, 2012

### Approved APB

Air Force Acquisition Executive (AFAE) Approved Acquisition Program Baseline (APB) dated September 20, 2012

### **Mission and Description**

The aging Ultra High Frequency (UHF) Military Satellite Communications (MILSATCOM) system is being phased out and replaced by the Advanced Extremely High Frequency (AEHF) Satellite Communications (SATCOM) system.

B-2 Extremely High Frequency SATCOM and Computer Increment 1 program (B-2 EHF Inc 1) supports the replacement of the present B-2 UHF Terminal Set with an EHF SATCOM system that will be compatible with the legacy EHF Satellite (MILSTAR I/II) constellation and the future AEHF satellite constellation. The B-2 EHF Inc 1 system is one element of a system-of-systems that includes the AEHF satellites, multiple platforms, and the Family of Advanced Beyond-Line-of-Site Terminals. The B-2 EHF upgrade is a three-increment program. Increment 1 will provide upgraded flight management computer processors, increased data storage, a re-hosted Flight Management Operational Flight Program, and a high bandwidth data bus in order to prevent degradation of existing capabilities resulting from EHF SATCOM installation. Additionally, the Increment 1 Integrated Processing Unit and Disk Drive Unit architectures establish a high speed fiber optic structure network as well as maintain connectivity to legacy interfaces. Increment 1 provides a processing growth path to future B-2 upgrades. B-2 EHF Inc 2 would ensure continuing secure, survivable communication capability; and B-2 EHF Inc 3 would enable the B-2 to interface with the Global Information Grid and provide Net Ready capability. This SAR addresses B-2 EHF Inc 1 only.

Note: EHF SATCOM Increment 2 was terminated on December 31, 2013 and Increment 3 was never started. Both Increments 2 and 3 were replaced with the EHF SATCOM program which is planned to begin development in FY 2016.

### **Executive Summary**

Pursuant to section 2432 of title 10, United States Code, this is the final SAR submission for B-2 EHF Inc 1, because the program is 90% or more expended and 90% or more delivered.

B-2 EHF Inc 1 consists of upgraded flight management processors, increased data storage and a high-bandwidth data bus which provide a processing growth path for future B-2 upgrades. On April 26, 2013, Air Force Global Strike Command authorized fielding and full-up (conventional and nuclear) use of EHF modified aircraft.

The program realized several significant accomplishments during this period. Six production installations occurred at Whiteman Air Force Base, MO and an additional three aircraft completed modification during programmed depot maintenance in Palmdale, CA. The remaining two aircraft are currently in modification.

The EMD contract is complete and is progressing through financial closeout.

The Air Force Acquisition Executive (AFAE) certified that the B-2 EHF Inc 1 Program was in compliance with the requirements of Section 2366a of title 10, United States Code on May 30, 2007; the certification waived the requirement for an analysis of alternatives.

There are no significant software-related issues with this program at this time.

# **Threshold Breaches**

<b>APB Breach</b>	es	
Schedule		
Performance	е	
Cost	RDT&E	
	Procurement	
	MILCON	
	Acq O&M	
O&S Cost		
<b>Unit Cost</b>	PAUC	
	APUC	

# Nunn-McCurdy Breaches

**Current UCR Baseline** 

**PAUC** None

**APUC** None

**Original UCR Baseline** 

**PAUC** None APUC None

### **Schedule**



Schedule Events									
SAR Baseline Current APB Events Production Production Estimate Objective/Threshold									
Milestone B	May 2007	May 2007	May 2007	May 2007					
Milestone C	Feb 2012	Feb 2012	Feb 2012	Feb 2012					
Final DIOT&E flight	Jul 2012	Jul 2012	Jul 2012	Jul 2012					
RAA	Mar 2015	Mar 2015	Mar 2016	Dec 2014					

### **Change Explanations**

None

#### **Notes**

RAA is defined as eight assigned aircraft modified, sufficient aircrews and maintenance personnel trained, sufficient aircrew and maintenance trainers upgraded, formal aircrew and maintenance technical orders delivered and adequate spares available to support 509th Bombardment Wing operational tasking. IOC is declared by the Commander, Air Force Global Strike Command when the B-2 operational squadrons have completed the upgrade.

### **Acronyms and Abbreviations**

DIOT&E - Dedicated Initial Operational Test and Evaluation RAA - Required Assets Available

### **Performance**

	Performance Characteristics										
SAR Baseline Production Estimate	Produ	nt APB uction Threshold	Demonstrated Performance	Current Estimate							
Information Assuran	ce (IA)										
Protection consistent w/the classification of data being stored, processed, or transferred in compliance with Senior Jersey Security Classification Guide and JAFAN 6/3 Manual, Protection Special Access Program Information Within Information Systems  Flight Management F	data being stored, processed, or transferred in compliance with Senior Jersey Security Classification Guide and JAFAN 6/3 Manual, Protection Special Access Program Information Within Information Systems	Protection consistent w/the classification of data being stored, processed, or transferred in compliance with Senior Jersey Security Classification Guide and JAFAN 6/3 Manual, Protection Special Access Program Information Within Information Systems	Protection consistent w/the classification of data being stored, processed, or transferred in compliance with Senior Jersey Security Classification Guide and JAFAN 6/3 Manual, Protection Special Access Program Information Within Information Systems	Protection consistent w/the classification of data being stored, processed, or transferred in compliance with Senior Jersey Security Classification Guide and JAFAN 6/3 Manual, Protection Special Access Program Information Within Information Systems							
IFC-P5 functionality	IFC-P5 functionality	IFC-P5 functionality	IFC-P5 functionality	IFC-P5 functionality							
		IFC-P5 functionality shall be maintained	IFC-P5 functionality maintained	IFC-P5 functionality shall be maintained							

# **Requirements Reference**

CPD dated July 19, 2011

# **Change Explanations**

None

### **Notes**

IFC-P5 is the fifth major block software release for the B-2 Weapon System and is specifically tied to the Radar Modernization Program.

# **Acronyms and Abbreviations**

IFC - Integrated Functional Capability JAFAN - Joint Air Force, Army, Navy

# **Track to Budget**

### **General Notes**

This SAR includes funding only for Increment 1 of the B-2 EHF Program.

### RDT&E

Appn		ВА	PE			
Air Force	3600	07	0101127F		_	
	Proje	ect	Name			
675345			B-2 EHF Inc 1 SATCOM and Computer Upgrade		(Shared)	(Sunk)
			Complete FY 2011			
676022			B-2 EHF Inc 1 SATCOM and Computer Upgrade		(Shared)	(Sunk)
	No	tes:	Complete F	/ 2013		
Air Force	3600	05	0604240F		_	
	Proje	ect		Name		
	653843		B-2 EHF Inc Computer U	1 SATCOM and pgrade	(Shared) (Sunk)	(Sunk)
	No	tes:	Complete F	<b>/</b> 2009		
lotos						

#### Notes

Prior to FY 2013, PE 0101127F project 6022 also funded B-2 EHF Increment 2.

# Procurement

Appn		ВА	PE							
Air Force	3010	07	0101127F		_					
	Line I	tem		Name						
	000075		000075		000075			1 SATCOM and Computer Upgrade port / Depot Activation	(Shared)	
Air Force	3010	06	0101127F		_					
	Line Item		Line Item Name							
	000999		B-2 EHF Inc Initial Spares	1 SATCOM and Computer Upgrade	(Shared)					
Air Force	3010	05	0101127F							
	Line I	tem		Name						
	B00200	)	B-2 EHF Inc Modifications	1 SATCOM and Computer Upgrade	(Shared)					
Air Force	3010	07	0101127F							
	Line Item B00200		Line Item Name		Name					
				1 SATCOM and Computer Upgrade actor Support	(Shared)	(Sunk)				

B002B0 B-2 EHF Inc 1 SATCOM and Computer Upgrade (Shared) (Sunk)

Interim Contractor Support

#### **Notes**

Aircraft Procurement, Air Force BA 05 line is shared for all B-2 Modifications (EHF SATCOM is modification number 110026 on the Exhibit P-40, Budget Item Justification). Funding for Initial Spares is in the shared BA 06 line; funding for Post Production Support is provided in BA 07 (Line Item 000075), and funding for Other Production is provided in BA 07 (Line Item B00200 and Line Item B002B0). The BA 07 line is shared for all B-2 Modifications.

# **Cost and Funding**

# **Cost Summary**

	Total Acquisition Cost											
	В	/ 2012 \$M		BY 2012 \$M	TY \$M							
Appropriation	SAR Baseline Production Estimate	Current Produc Objective/T	ction	Current Estimate	SAR Baseline Production Estimate	Current APB Production Objective	Current Estimate					
RDT&E	450.2	450.2	495.2	430.5	431.5	431.5	411.6					
Procurement	129.0	129.0	141.9	123.4	135.2	135.2	128.8					
Flyaway				112.9			117.8					
Recurring				112.9			117.8					
Non Recurring				0.0			0.0					
Support				10.5			11.0					
Other Support				1.8			1.8					
Initial Spares				8.7			9.2					
MILCON	0.0	0.0		0.0	0.0	0.0	0.0					
Acq O&M	0.0	0.0		0.0	0.0	0.0	0.0					
Total	579.2	579.2	N/A	553.9	566.7	566.7	540.4					

### **Confidence Level**

Confidence Level of cost estimate for current APB: 55%

This APB reflects cost and funding data based on the B-2 EHF Increment I SCP. This cost estimate was quantified at the Mean (~55%) confidence level.

Total Quantity										
Quantity	SAR Baseline Production Estimate	Current APB Production	Current Estimate							
RDT&E	4	4	4							
Procurement	16	16	16							
Total	20	20	20							

# **Cost and Funding**

# **Funding Summary**

Appropriation Summary											
FY 2017 President's Budget / December 2015 SAR (TY\$ M)											
Appropriation	Prior	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total		
RDT&E	411.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	411.6		
Procurement	127.9	0.7	0.2	0.0	0.0	0.0	0.0	0.0	128.8		
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
PB 2017 Total	539.5	0.7	0.2	0.0	0.0	0.0	0.0	0.0	540.4		
PB 2016 Total	539.9	1.4	0.2	0.0	0.0	0.0	0.0	0.0	541.5		
Delta	-0.4	-0.7	0.0	0.0	0.0	0.0	0.0	0.0	-1.1		

	Quantity Summary										
	FY 2017 President's Budget / December 2015 SAR (TY\$ M)										
Quantity	Undistributed	Prior	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
Development	4	0	0	0	0	0	0	0	0	4	
Production	0	16	0	0	0	0	0	0	0	16	
PB 2017 Total	4	16	0	0	0	0	0	0	0	20	
PB 2016 Total	4	16	0	0	0	0	0	0	0	20	
Delta	0	0	0	0	0	0	0	0	0	0	

# **Cost and Funding**

# **Annual Funding By Appropriation**

Annual Funding 3600   RDT&E   Research, Development, Test, and Evaluation, Air Force											
		TY \$M									
Fiscal Year	Quantity	End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program				
2005							4.4				
2006							38.3				
2007							75.7				
2008							71.6				
2009							85.0				
2010							49.5				
2011							48.5				
2012							38.2				
2013							0.4				
Subtotal	4						411.6				

Annual Funding 3600   RDT&E   Research, Development, Test, and Evaluation, Air Force											
		BY 2012 \$M									
Fiscal Year	Quantity	End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program				
2005							5.0				
2006							42.3				
2007							81.4				
2008							75.5				
2009							88.4				
2010							50.8				
2011							48.9				
2012							37.8				
2013							0.4				
Subtotal	4						430.5				

	Annual Funding 3010   Procurement   Aircraft Procurement, Air Force										
		TY \$M									
Fiscal Year	Quantity	End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program				
2012	5	47.8	3.5		51.3	0.2	51.5				
2013	11	45.1	5.8		50.9	5.4	56.3				
2014			9.4		9.4	1.2	10.6				
2015			6.2		6.2	3.3	9.5				
2016						0.7	0.7				
2017	<b></b>	<b></b>			<b></b>	0.2	0.2				
Subtotal	16	92.9	24.9		117.8	11.0	128.8				

	Annual Funding 3010   Procurement   Aircraft Procurement, Air Force										
		BY 2012 \$M									
Fiscal Year	Quantity	End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program				
2012	5	46.5	3.4		49.9	0.2	50.1				
2013	11	43.0	5.5		48.5	5.2	53.7				
2014			8.8		8.8	1.2	10.0				
2015			5.7		5.7	3.1	8.8				
2016						0.6	0.6				
2017	<b></b>	<b></b>			<b></b>	0.2	0.2				
Subtotal	16	89.5	23.4		112.9	10.5	123.4				

### **Low Rate Initial Production**

Item	Initial LRIP Decision	Current Total LRIP
Approval Date	2/22/2007	1/14/2011
<b>Approved Quantity</b>	2	5
Reference	Milestone B ADM	Milestone C Acquisition Strategy Panel ADM
Start Year	2012	2012
End Year	2012	2012

The Current Total LRIP Quantity is more than 10% of the total production quantity due to the need to achieve cost efficiencies within the small B-2 fleet and to deliver this capability in a timely manner.

# **Foreign Military Sales**

None

# **Nuclear Costs**

None

# **Unit Cost**

# **Unit Cost Report**

Cost

Quantity

**Unit Cost** 

	BY 2012 \$M	BY 2012 \$M	% Change	
Item	Current UCR Baseline (Sep 2012 APB)	Current Estimate (Dec 2015 SAR)		
Program Acquisition Unit Cost		•		
Cost	579.2	553.9		
Quantity	20	20		
Unit Cost	28.960	27.695	-4.37	
Average Procurement Unit Cost				
Cost	129.0	123.4		
Quantity	16	16		
Unit Cost	8.062	7.712	-4.34	
	BY 2012 \$M	BY 2012 \$M		
Item	Original UCR Baseline (May 2007 APB)	Current Estimate (Dec 2015 SAR)	% Change	
Program Acquisition Unit Cost		•		
Cost	718.4	553.9		
Quantity	21	20		
Unit Cost	34.210	27.695	-19.04	
Average Procurement Unit Cost				

125.0

7.353

17

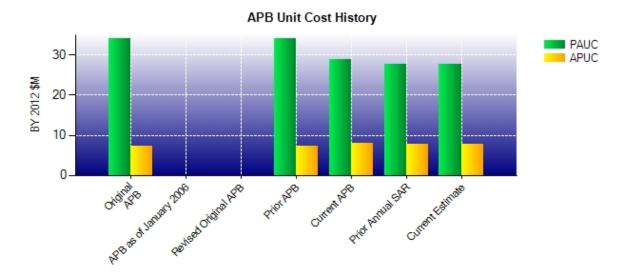
123.4

7.712

16

+4.88

# **Unit Cost History**



Item	Date	BY 201	2 \$M	TY \$M		
item	Date	PAUC	APUC	PAUC	APUC	
Original APB	May 2007	34.210	7.353	33.624	7.747	
APB as of January 2006	N/A	N/A	N/A	N/A	N/A	
Revised Original APB	N/A	N/A	N/A	N/A	N/A	
Prior APB	May 2007	34.210	7.353	33.624	7.747	
Current APB	Sep 2012	28.960	8.062	28.335	8.450	
Prior Annual SAR	Dec 2014	27.725	7.762	27.075	8.119	
Current Estimate	Dec 2015	27.695	7.712	27.020	8.050	

### **SAR Unit Cost History**

Initial SAR Baseline to Current SAR Baseline (TY \$M)									
Initial PAUC	Changes								PAUC
Development Estimate	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	Production Estimate
33.624	-0.350	1.381	0.375	0.000	-6.075	0.000	-0.620	-5.289	28.335

Current SAR Baseline to Current Estimate (TY \$M)									
PAUC Production	Changes								PAUC Current
Production Estimate	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	Estimate
28.335	-0.010	0.000	0.000	0.000	-1.395	0.000	0.090	-1.315	27.020

Initial SAR Baseline to Current SAR Baseline (TY \$M)									
Initial APUC	Changes								APUC
Development Estimate	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	Production Estimate
7.747	-0.150	0.109	0.469	0.000	1.050	0.000	-0.775	0.703	8.450

Current SAR Baseline to Current Estimate (TY \$M)									
APUC	Changes							APUC	
Production Estimate	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	Current Estimate
8.450	-0.019	0.000	0.000	0.000	-0.494	0.000	0.112	-0.401	8.050

SAR Baseline History									
Item	SAR Planning Estimate	SAR Development Estimate	SAR Production Estimate	Current Estimate					
Milestone I	N/A	N/A	N/A	N/A					
Milestone B	N/A	Feb 2007	May 2007	May 2007					
Milestone C	N/A	Jul 2011	Feb 2012	Feb 2012					
IOC	N/A	Mar 2014	Mar 2015	Dec 2014					
Total Cost (TY \$M)	N/A	706.1	566.7	540.4					
Total Quantity	N/A	21	20	20					
PAUC	N/A	33.624	28.335	27.020					

Required Assets Available is used in place of IOC.

# **Cost Variance**

Summary TY \$M									
Item	RDT&E	Procurement	MILCON	Total					
SAR Baseline (Production Estimate)	431.5	135.2		566.7					
Previous Changes									
Economic	+0.3	+0.1		+0.4					
Quantity									
Schedule									
Engineering									
Estimating	-20.2	-7.5		-27.7					
Other									
Support		+2.1		+2.1					
Subtotal	-19.9	-5.3		-25.2					
Current Changes									
Economic	-0.2	-0.4		-0.6					
Quantity									
Schedule									
Engineering									
Estimating	+0.2	-0.4		-0.2					
Other									
Support		-0.3		-0.3					
Subtotal		-1.1		-1.1					
Adjustments									
Total Changes	-19.9	-6.4		-26.3					
CE - Cost Variance	411.6	128.8		540.4					
CE - Cost & Funding	411.6	128.8		540.4					

Summary BY 2012 \$M									
Item	RDT&E	Procurement	MILCON	Total					
SAR Baseline (Production	450.2	129.0		579.2					
Estimate)									
Previous Changes									
Economic									
Quantity									
Schedule									
Engineering									
Estimating	-19.9	-6.9		-26.8					
Other									
Support		+2.1		+2.1					
Subtotal	-19.9	-4.8		-24.7					
Current Changes									
Economic									
Quantity									
Schedule									
Engineering									
Estimating	+0.2	-0.4		-0.2					
Other									
Support		-0.4		-0.4					
Subtotal	+0.2	-0.8		-0.6					
Adjustments									
Total Changes	-19.7	-5.6		-25.3					
CE - Cost Variance	430.5	123.4		553.9					
CE - Cost & Funding	430.5	123.4		553.9					

Previous Estimate: December 2014

RDT&E		\$M	
Current Change Explanations	Base Year	Then Year	
Revised escalation indices. (Economic)	N/A	-0.2	
Adjustment for current and prior escalation. (Estimating)	+0.2	+0.2	
RDT&E Subtotal	+0.2	0.0	

Procurement	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-0.4
Revised estimate due to fact-of-life changes and reallocation to other B-2 efforts in FY 2013 and FY 2014. (Estimating)	-0.9	-0.8
Adjustment for current and prior escalation. (Estimating)	+0.5	+0.4
Adjustment for current and prior escalation. (Support)	-0.1	0.0
Decrease in Initial Spares due to removal of program funding that is not required for contracted deliveries. (Support)	-0.3	-0.3
Procurement Subtotal	-0.8	-1.1

### Contracts

### **Contract Identification**

**Appropriation:** Procurement

Contract Name: EHF Inc 1 SatCom Production
Contractor: Northrop Grumman Corp.
Contractor Location: Palmdale, CA 93550
Contract Number: F33657-99-D-0028/62
Contract Type: Firm Fixed Price (FFP)
Award Date: September 27, 2012
Definitization Date: September 27, 2012

Contract Price							
Initial Co	ntract Price (	(\$M)	Current C	ontract Price (	\$M)	Estimated Pr	ice At Completion (\$M)
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
108.1	N/A	16	108.1	N/A	16	108.1	108.1

### **Cost and Schedule Variance Explanations**

Cost and Schedule Variance reporting is not required on this (FFP) contract.

### **Notes**

Contract awarded September 27, 2012, for LRIP, with three options, one for FRP, and two for installs.

# **Deliveries and Expenditures**

Deliveries					
Delivered to Date Planned to Date Actual to Date Total Quantity Perce					
Development	4	4	4	100.00%	
Production	14	14	16	87.50%	
Total Program Quantity Delivered	18	18	20	90.00%	

Expended and Appropriated (TY \$M)			
Total Acquisition Cost	540.4	Years Appropriated	12
Expended to Date	512.4	Percent Years Appropriated	92.31%
Percent Expended	94.82%	Appropriated to Date	540.2
Total Funding Years	13	Percent Appropriated	99.96%

The above data is current as of February 09, 2016.

### **Operating and Support Cost**

#### **Cost Estimate Details**

Date of Estimate: August 22, 2012

Source of Estimate: SCP

Quantity to Sustain: 20

Unit of Measure: Aircraft

Service Life per Unit: 35.00 Years

Fiscal Years in Service: FY 2013 - FY 2048

#### **Sustainment Strategy**

The maintenance concept for the B-2 EHF Inc 1 is two level (organizational and depot). Organizational maintenance will consist of Air Force maintenance personnel removing and replacing failed items, performing preventative maintenance, and conducting fault isolation actions. All repairs of the Line Replaceable Units (LRUs) removed from the B-2 aircraft will be accomplished at the depot level. The source of repair for depot maintenance for Increment 1 was initially projected to be Warner Robins Air Logistics Complex (WR-ALC) for the two LRUs, the Integrated Processing Unit and the Disk Drive Unit. An Office Under Secretary Defense/Acquisition, Technology & Logistics action item out of July 2011 Defense Acquisition Executive Summary briefing directed reassessment of the organic depot strategy based on LRU reliability projections. In response, a Workload Shift package (from organic repair at WR-ALC to Contractor Depot Repair) was submitted and approved. The System Development and Demonstration (SDD) contract requires delivery of repair data and associated training. The planning for establishing this repair capability will be accomplished during the SDD contract. There are no increased O&S costs associated with B-2 EHF Inc 1, because improved reliability and maintainability provided by this modification are projected to reduce O&S costs incurred for B-2 legacy computers. The B-2 EHF Inc 1 modification is replacing two legacy LRUs with two high reliability LRUs, per Mean Time Between Failure estimates, in each of the 20 aircraft.

### **Antecedent Information**

No Antecedent

Annual O&S Costs BY2012 \$K				
Cost Element	B-2 EHF Inc 1 Average Annual Cost Per Aircraft	None (Antecedent) N/A		
Unit-Level Manpower	22.851	0.000		
Unit Operations	0.235	0.000		
Maintenance	46.634	0.000		
Sustaining Support	55.031	0.000		
Continuing System Improvements	17.873	0.000		
Indirect Support	7.983	0.000		
Other	0.000	0.000		
Total	150.607			

		Cost \$M		
Item	B-2 EHF Inc 1			
Item	Current Production APB Objective/Threshold		Current Estimate	None (Antecedent)
Base Year	105.4	115.9	105.4	N/A
Then Year	151.0	N/A	151.0	0.0

### **Equation to Translate Annual Cost to Total Cost**

Total O&S Cost/number of aircraft/years of service = Unitized O&S Cost. \$105.4M/20/35=\$0.15M

O&S Cost Variance				
Category	BY 2012 \$M	Change Explanations		
Prior SAR Total O&S Estimates - Dec 2014 SAR	105.4			
Programmatic/Planning Factors	0.0			
Cost Estimating Methodology	0.0			
Cost Data Update	0.0			
Labor Rate	0.0			
Energy Rate	0.0			
Technical Input	0.0			
Other	0.0			
Total Changes	0.0			
Current Estimate	105.4			

# **Disposal Estimate Details**

Date of Estimate:

Source of Estimate:

Disposal/Demilitarization Total Cost (BY 2012 \$M):

Disposal costs for this modification are included in the B-2 platform.